

Response to Office Action Summary

Application No. 10/686,262

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Examiner: Gollamudi S. Kishore, Ph.D.

1. Claim 1 was amended appropriately to claim the only cationic lipids with carbamate linkages depicted in Formula S and the synthesis of which was demonstrated in multiple examples.

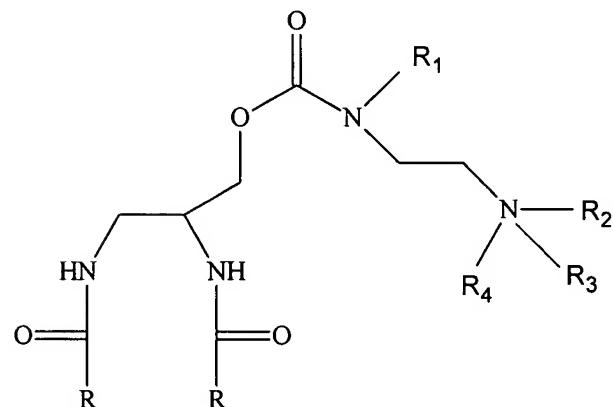
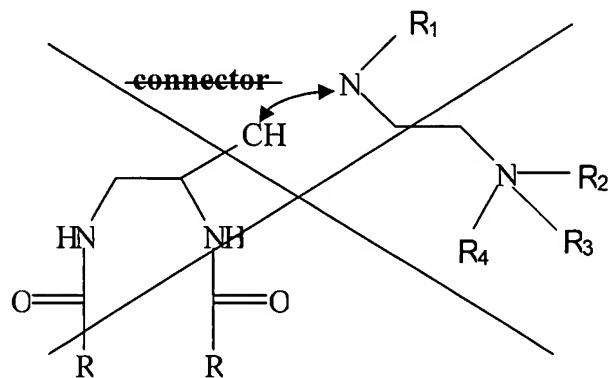
2. Claim 2 was cancelled and other dependent claims were added.

3-4. The instant cationic compounds disclosed in US patent, 6,268,516 by Schneider et al., distinctly different from the compounds claimed in the pending application 10/686,262. More specifically, all compounds disclosed herein are 1,2-diaminopropyl-3-carbamoyl derivatives whereas the compounds described in US6,268,516 are 1,3-diaminopropyl-2-carbamoyl analogs.

5. Similarly, to the argument above, the compounds claimed in pending application No. 10/686,262 are 1,2-diaminopropyl-3-carbamoyl derivatives whereas the compounds described in copending application 10/686,374 are 1,3-diaminopropyl-2-carbamoyl analogs. Thus, there is no issue of double patenting.

B. Amendments to the Claims

1. (Currently Amended) Cationic lipids of the general formula S for nucleic acid delivery *in vitro* and *in vivo*.



Structure S of cationic lipids for claim 1.

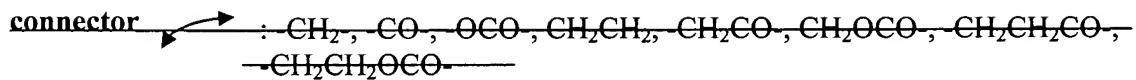
R = C₁₁H₂₃, C₁₃H₂₇, C₁₅H₃₁, C₁₇H₃₅, C₁₇H₃₁

R₁ = H, CH₃, CH₂CH₂NH₂, CH₂CH₂NHCH₃, CH₂CH₂N(CH₃)₂, CH₂CH₂NH-C(NH₂)=NH

R₂ = H, CH₃

R₃ = H, CH₃

R₄ = H, CH₃



The **connector** shows how the two parts of structure S can be chemically linked together.

2. (Cancelled)
3. (New) The lipid dispersion of claim 1, comprising an acid salt of the cationic lipids of formula S.
4. (New) The lipid dispersion of claim 1, wherein the dispersion further comprises a neutral phospholipid species.
5. (New) The lipid dispersion of claim 1, wherein the dispersion further comprises a neutral cholesterol-based surfactant.
6. (New) The lipid dispersion of claim 1, further comprising polyethylene glycol moieties.